

131ST AES CONVENTION

CONFERENCE
October 20-23, 2011
EXHIBITS
October 21-23, 2011
Jacob K. Javits Convention Center
New York, NY

WELCOME TO THE 131ST AES CONVENTION

Audio Engineering Society



Convention chair: Jim Anderson



REGISTRATION & EXHIBITS

Good weather, an enthusiastic audio industry and a not-to-be-missed program of events brought nearly 16,000 attendees to the 131st Convention at the Javits Center in New York. Thanks to the outstanding efforts of Convention Chair Jim Anderson and his committee, four days of technical program and three days of exhibition were packed with things to do. The chance was taken to meet up with old friends, network with new ones, update knowledge, and discover the latest in audio technology on the exhibits floor. "Soon after the curtains fell on last year's event, our 2011 committee began the first of over a dozen intensive planning meetings," reported Anderson. Each chair brought an extraordinary degree of commitment, enthusiasm, and professionalism to the table. The results of their labors registered rave reviews and high praise from attendees and exhibitors alike."

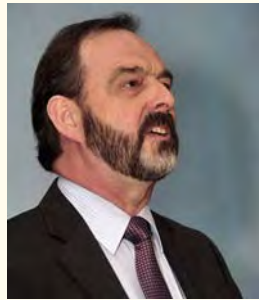
SCHEDULE



OPENING AND AWARDS CEREMONY

Welcoming delegates to the convention at the opening and awards ceremony on the first morning, Executive Director Roger Furness hailed the wonderful turnout with no empty seats in the hall. A tremendous choice of activities was available, he said. Recalling his first AES convention, which had been held at the Waldorf Astoria in New York City, AES President Jim Kaiser encouraged attendees to enjoy the opportunities afforded by the venue, including exquisite dining, Broadway shows, and Times Square. Keeping up with the times, the AES had introduced a new iPhone app with links to news, events information, and videos, he said, thanks to Webmaster Steve Johnson. Kaiser thanked Jim Anderson and his committee most warmly for their work on the planning of this event, and Anderson in particular for his work on the video “shorts” from the oral history program that had been released prior to the convention. He encouraged everyone to make a note of the five specialized audio conferences coming up, as well as the Budapest convention in April 2012. There would be more than 300 hours of events at this convention, said Jim Anderson, “You need a high sampling rate to take it all in!” If you plan well, he said, you can fit in the single best opportunity to network in audio.

Introducing the awardees at the 131st Convention was Agnieszka Roginska. The winner of the student paper award, she said, was Amandine Pras of McGill University, for her paper on the impact of producer’s comments during recording sessions (paper 8579). The new peer-reviewed paper award was presented to Florian Völk for his work on binaural audio. Sandy Requa’s service to the AES as executive assistant to the executive director over many years earned her the award of Citation at this ceremony, for which she received a standing ovation. Citations were also awarded to Gary Gottlieb, for outstanding service to the Society, and to Andres Mayo for outstanding contributions to the Latin American pro-audio community. The Board of Governors Award, normally given to those that have put in exceptional contributions to the organization of AES events, was presented here to Karlheinz Brandenburg and Mark Sandler (42nd Conference), Peter Mapp (130th Convention), Jim McTigue and Valerie Tyler (129th Convention).



Roger Furness



Jim Kaiser



Jim Anderson



Véronique Larcher



Agnieszka Roginska

The Silver Medal Award, given to AES Fellows who have made outstanding developments or achievements in audio engineering, was set up in honor of Alexander Graham Bell, Emile Berliner, and Thomas Edison. Saul Walker received this medal in recognition of decades of innovative analog designs that have raised the bar on audio quality while offering solutions that empower the creative side of all audio engineers. At the top of the awards tree is the Gold Medal, given only rarely to outstanding individuals who have sustained their achievements over many years. Rupert Neve (not able to receive his award in person) was presented with the Gold Medal for his contributions to analog audio designs and mixing consoles, and in honor of a career spanning over 60 years, influencing generations of audio designers. Phil Ramone’s Gold Medal marked more than four decades of exceptional and innovative service to the music and recording industries as a recording and mixing engineer, record producer, audio systems designer, and mentor.

A large number of AES Fellowships were presented to deserving candidates at this convention in New York. Marc Aubort received his in recognition of a long career of excellence in the recording arts; Peter Easty for his outstanding contributions to digital audio systems design and signal processing; Geoff Emerick for his significant contributions to popular music recording; Steve Green for two decades of valuable contributions to mixed-signal audio design; Harry Hirsch for over 50 years of pioneering work in the recording industry and important contributions to the Oral History Project; Michael Lannie, for conspicuous service to the Moscow AES section; Aki Makivirta, in recognition of his bringing professional studio monitors into the digital era; Glenn Meadows for promoting and exemplifying technical and artistic excellence in audio; Eugene Patronis for many years of contributions to AES and the advancement of audio education; Ronald Prent, recognizing many years contributing to the advancement of artistry in surround sound mixing and auditory design; and Don Puluse for excellent work in the recording arts, education, and service to the Society.

Finally, an Honorary Membership was offered to Frank Laico in grati-



Saul Walker receives the Silver Medal.



Phil Ramone receives the Gold Medal.



Charles Limb delivers keynote address to a standing-room-only crowd.

131st Convention Awards Presentation



Board of Governors Awards (from left): Jim McTigue, Mark Sandler, Peter Mapp, and Valerie Tyler (Karlheinz Brandenburg, no photo)



Citations (from left): Sandy Requa, Gary Gottlieb, and Andres Mayo

Student paper award:
Amandine Pras



Best paper award: Florian Völk

Fellowships (from left): Marc Aubort, Peter Easty, and Geoff Emerick



Fellowships (from left): Steve Green, Harry Hirsch, Aki Makivirta, and Glenn Meadows



Fellowships (from left): Eugene Patronis, Ronald Prent, Don Puluse, and Michael Lannie

tude for his achievements in the recording arts and his willingness to share his experience with the members of the AES Pacific Northwest Section.

Charles Limb fascinated the audience with his talk on the neural basis of creativity, as keynote speaker at the opening ceremony. When we hear something beautiful, it affects us, he said, but a lot of

people can't hear music properly owing to various hearing diseases including cancers. The two "thin strings of pasta" that form the auditory nerves are all that carries the rich information about sound to the brain and are susceptible to certain tumors that he has studied. There is some hope for those with more serious forms of hearing damage in the form of cochlear implants, a field in which Limb is a specialist. Other senses can't be rehabilitated in the same way, he said, although the musical quality available with such implants is currently rather crude and speech is much easier to deal with. Users can't differentiate between instruments, and pitch perception can be a long way off, but children who grow up with implants can be trained to hear music. In Limb's studies of musical improvisation he has used magnetic resonance imaging to study the brain areas that are active. It appears that the brain turns off some inhibitory responses during improvisation and activates the area involved in self-reflection.

A ROCKING EXHIBITION DRAWS THE CROWDS

A mood of great enthusiasm suffused both the thousands of attendees and the 310 exhibitors (see list p. 980) that took part in the equipment exhibition at the convention. Comments from exhibitors confirmed the positive feeling surrounding the event. "I was taken by surprise when the first day of the show ended," remarked Mick Olesh, executive vice president of Waves. "The number of qualified customers and end-users who passed through our booth was overwhelming." "Right up until the last 5 minutes of the show, the intensity of the good, qualified traffic was far beyond our expectations," said Genelec's marketing director, Will Eggleston. This year's AES Convention "had the feeling and pace of the glory days."

A strong presence from leading workstation manufacturer, Avid, supported the launch of its Pro Tools|HDX workstation and Pro Tools version 10 software. The new hardware offers up to five times more DSP power per card, much more headroom, and a higher track count, scalable to the needs of the user. Pro Tools|HD can therefore now be run natively using the host computer's processing power, or DSP-accelerated using the new HDX hardware. Along with the new system comes Avid's AAX (Avid Audio extension) plug-in format, which aims to offer good compatibility between native and accelerated systems. At the show, Sonnox announced that it is making its Oxford plug-ins compatible with AAX. Metric Halo joined the fray too, with new Pro Tools plug-ins ported from its native system, including TransientControl and Character, the latter emulating the sound of analog front-end equipment. In further news on the plug-ins front, Waves Audio announced the launch of a plug-in bundle based on the signal chain of legendary producer and engineer, Eddie Kramer. The bundle, called "Tapes, Tubes, and Transistors" contains

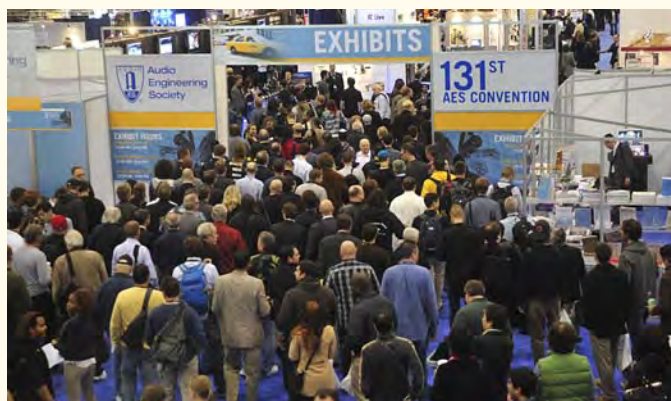


Exhibition visitors concentrate on an engaging demonstration.

vintage plug-ins modelling a Helios console channel, a Pye compressor, and a rare tape machine. Waves also showed a hardware implementation of its Fairchild 670 compressor emulator, the so-called PuigChild, and launched its Phil Manchester Audio Forensics package, designed specifically for law enforcement agencies that capture covert audio.

Analog hardware made a strong showing on the floor, with many people interested in classic equipment. An article in the *AES Daily* noted the ongoing success of analog consoles such as the API 1608, with new inboard automation launched at this convention, as well as a new Harrison 950m compact music production console. However there was also a lot of activity in the emulation of classic analog processes, such as in AnaMod's range of signal processors. Unlike plug-in digital processing, AnaMod uses mathematical modelling that claims not to involve any digital processing, resulting in devices such as the ATS-1 Analog Tape Simulator. Thermionic Culture Ltd's "Culture Vulture Solo" is a 2U rack-mount unit that uses vacuum tubes (valves) to process guitar and bass instruments. Although originally developed as a distortion box, the new version had a wider range of settings and has both "Clean" and "Dirty" channels that can be switched between.

Looking to transducers, a range of new loudspeakers and microphones showed their faces for the first time at the exhibition. Genelec's tri-amped DSP monitoring system, the 1283CF, is a compact three-way monitoring system in a slim speaker enclosure, designed for medium-sized control rooms. With a bass response down to 57 Hz, this can either be used in conjunction with a sub or on its own. Serving the live sound market, Community's dSPEC is said to herald an all-new approach to configuring, controlling, and commissioning sound system installations. Employing Real Sound Lab's automatic loudspeaker equalization technology, the system also includes amplifier calibration and limiter protection for drivers. At the other end of the signal chain, DPA's new d:fine headset microphone features a special earpiece made from a sprung material used in hearing aid design, which makes it comfortable to wear. A smaller capsule housing and windshield than in previous models gives rise to better pop and handling noise without compromising sound quality. In-ear monitoring was also on the cards for AKG, which introduced its IVM 4500 IEM system, having a wide range of sophisticated facilities for making use of the RF spectrum, and battery life of up to 10 hours in receivers. Josephson Engineering's latest Series 7 microphone also made its U.S. debut in New York, being a cardioid-only mic intended for vocals and other studio instruments. There was also a stereo version of Audio-Technica's 40 series, the AT4050ST, configured as an MS pair with cardioid and figure-eight capsules.



The crowds pour into the exhibition on the first day of the show.

WORKSHOPS, TUTORIALS, AND MASTER CLASSES FOR EVERYONE

Organized with characteristic efficiency by Natanya Ford and Alan Silverman, the opportunities for education across the range of audio topics were numerous at the 131st Convention. Andres Mayo introduced delegates to his ear-training tools for mastering engineers, helping the audience to identify different frequency ranges, as well as explaining de-essing, de-woofing, and other tricks of the trade. Toward the more scientific end of the spectrum, Poppy Crum of Dolby Labs gave an enthralling 90-minute tutorial aimed at increasing the understanding of hearing damage. We discovered how antioxidants such as Vitamin C can help to reduce the chance of hearing damage, particularly if present in the body immediately prior to sound exposure, and how drugs such as aspirin can be ototoxic (poisonous to the hearing organ). There is hope yet for the preservation of hearing using chemical methods and supplements, it would seem.

In his Master Class “Human Hearing 101,” Jim Johnston brought the audience up to speed on how the ear does frequency analysis, then the relationship between that and localization, masking, and hearing thresholds. From the world of studio recording, Tony Visconti brought together techniques and experiences culled from a lifetime of collaboration with some of the world’s most celebrated artists, including his ongoing work with The Kaiser Chiefs.

From among 19 workshops, attendees could choose to learn about surround music recording from Morten Lindberg, the mobile generation of music creation from a group chaired by Jay LeBoeuf, or capturing height in surround from a panel chaired by Paul Geluso.



Producing across generations with Nicholas Sansano and panel.

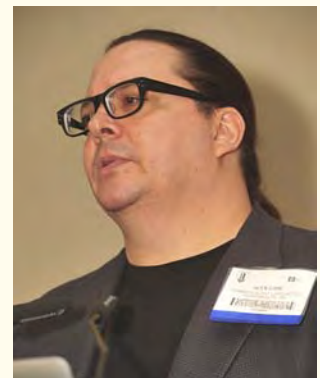


“JJ” Johnston (left) and Tony Visconti deliver popular master classes.



Bill Whitlock in full flow during one of his popular design briefings.

Of particular interest to the loudspeaker market was a panel session on coping with supply and demand for neodymium, the wonder material that has enabled super magnets to revolutionize the design of loudspeakers. As this material becomes rarer, the cost has skyrocketed. Spiro Iraclianos of Harman discussed the problem with Alexander King of Ames Laboratory and Stan Trout of Molycorp.

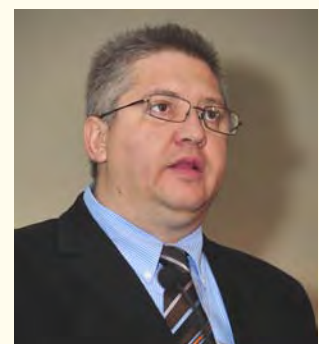


Alex Case during one of his well-attended tutorial sessions.

TECHNICAL PAPERS IN FOCUS

For the first time at an AES convention, papers cochairs Véronique Larcher and Agnieszka Roginska had enabled a fully refereed track of paper submissions, which proved popular with some academic authors. Engineering Briefs, introduced recently by *Journal* editor John Vanderkooy, enabled authors of practical, application-oriented papers to contribute the results of their work in four separate sessions including recording/production, applications of audio engineering, signal processing, and perception. A large number of poster sessions provided a forum for authors of scientific papers to discuss their work with interested participants in the area outside the conference halls.

Among the wide range of interesting presentations, Sean Olive of Harman presented new evidence to show that teenagers may prefer accurate sound reproduction. In two separate listening tests he came across results that provided support for the idea that teenagers preferred CD quality to MP3, when given the chance to compare it directly, and also preferred the most accurate and neutral loudspeaker of four tested. Shengchao Li, in a



Catalin Grigoras delivers a paper on audio forensics.



Papers cochairs:
Véronique Larcher (left)
and Agnieszka Roginska



Broadcast sessions chair:
David Bialik



Facilities chair, Michael
McCoy, left, with convention
chair, Jim Anderson



Natanya Ford (workshops),
Henry Cohen (live sound), and
Alan Silverman (masterclasses)



Historical events chair:
Harry Hirsch



Games audio chair:
Steve Martz



Student/career events
cochairs: Philip Parenteau, left,
and John Krivit



Live sound events cochairs:
Henry Cohen and Mac Kerr



Product design cochairs:
Bob Moses (left) and
Jonathan Novick



Technical Council liaison:
Bob Schulein



The volunteer team with Doron
Schacter, chair



Oliver Berliner, left, and , Louis
Manno, technical tours chair

Thanks to all the AES 131st Convention Committee Members!

poster session on audio equipment measurement, attempted to explain why tube amplifiers have a fat sound while solid state amplifiers don't, considering aspects such as output tube nonlinearity, amplifier output impedance, and nonlinearity of the output transformer inductance. Explaining binaural synthesis, papers award winner Florian Völk described a detailed system of theoretical analysis of the signal paths and systems involved in data-based synthesis scenarios. He concluded that the most important results are the necessity of blocked auditory canal measurements and the selection of proper headphones for completely correct individual binaural synthesis.

SPECIALIZED STREAMS TARGET KEY AUDIENCES

Four specialized streams of events, targeted at areas of ongoing interest for the AES, were run in parallel during the four days of the convention. A broadcast and media streaming track was coordinated by David Bialik, consisting of fully 17 different events including workshops on facility design, streaming and encoding, loudness issues, history, and supporting people with disabilities. Experts in audio broadcasting from around the world came to share their experience

and knowledge with convention visitors. Henry Cohen and Mac Kerr did outstanding work in pulling together 13 live sound seminars. Of particular interest at the present time was the topic of television band devices (TVBDs) and the new protocols for operating wireless microphones. Geolocation databases that direct TVBD operations are now being tested, and there are new rules governing both licensed and unlicensed wireless production equipment. Eight experts on the topic discussed the topic under Henry Cohen's chairmanship on the Saturday of the convention.

Also with 13 sessions to his credit, Steve Martz led the Game Audio stream with great aplomb, introducing novel topics in this growing field such as "audio as a real-time input and feedback mechanism for full-body gaming." Scott Selfon of Microsoft and Gene Semel of Sony Computer Entertainment looked at the ways in which audio can increasingly be used as an input to games as well as an output, as well as how audio can be used as a replacement for haptic feedback when no tactile system is used. There was also the question of game audio programming for the Android mobile platform, tackled by Peter Drescher of Twittering Machine, who pitted the FMOD audio middleware system against Java to discover the pros and cons of each.

Finally a full product design track initiated by Bob Moses and Jonathan Novick offered twelve sessions to those involved in electronic engineering for audio. Some great sessions on the latest in component and design technology were presented, including a tutorial on the real-time audio processing capabilities of microcontrollers and application processors, given by Paul Beckmann. Bruce Hofer of Audio Precision discussed “Building Analog in the 2010s,” paying attention to choice of components, physical layout, and topology of circuits in order to optimize analog performance.

SPECIAL EVENTS MAKE THE CONVENTION BUZZ

Convention Chair Jim Anderson had also been responsible for special events at the 131st, putting together a compelling program involving top professionals from the world of audio. Packed to the aisles was Phil Ramone’s session with engineer Dae Bennett discussing the production of his father Tony Bennett’s new *Duets II* album. Recounting their times and experiences making this album of duets between Bennett and artists such as Mariah Carey and Lady Gaga, it was possible to discover some of the chemistry that goes to ensure a successful result under circumstances that are often complicated. In a last-minute addition to the program, Judy Collins, folk and pop music icon talked, with Jason King about her life, career, and the making of her new album, *Bohemian*.

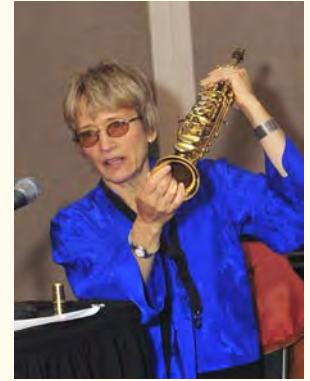
Platinum Producers, Mastering, and Engineers are always popular at U.S. conventions, and this time was no exception. David Weiss, cofounder of SonicScoop, hosted “The Producer’s Portfolio,” with Steve Jordan, David Kahne, and Gabe Roth, to chew over the producer’s personal artistic visions and the growing bodies of work their creative philosophies plot into reality. “You have questions, we have answers” was the theme of the mastering panel, chaired by Bob Ludwig, during which the panelists shed some light on one of the more secretive parts of the record-making chain. (For an interesting insight into the mastering engineer’s trade, see the recent AES tutorial video by Mark Wilder at <http://www.aes.org/events/131/workshops/?ID=2876#wilder>.) International recording star Ben Folds, appeared on the Friday to discuss his career, influences, and the recording business with Errol Kolosine. Sam Berkow moderated a panel that had been working on a restoration of recordings from the Grateful Dead tour of Europe in 1972. Cosette Collier’s “Legends of Nashville Sound” featured the engineers, producers, and studio musicians responsible for this phenomenon, beginning with the RCA years in the 1950s.

Graham Blyth’s organ concert at the Central Synagogue featured the impressive Casavant organ with two consoles and 55 stops, completed in 2002 in memory of former AES member Gabe Wiener. The organ is the result of three years of planning and 21,000 work hours by Casavant’s artisans and musicians. Starting his recital with the well-known Fantasia and Fugue in G minor by Bach, Graham moved through gems such as Bach’s “Come, Sweet Death,” arranged by Virgil Fox, to finish with a grand finale of Guilment’s Sonata No. 1 in D minor.

A series of “Hot Lunch” and lunchtime keynote addresses provided interesting and educational diversions for those who could manage to do without food in the middle of the day. Karlheinz Brandenburg told “The MP3 Story” while Daniel Schlessinger introduced a new prototype microphone controller that offers a range of built-in special effects and control functions. Ron Ajemian introduced the audience to fiber optics for audio, showing how easy it is to put together fiber optic connectors using the right tools, while Jane Ira Bloom, soprano saxophonist, composer, and pioneer in the use of live electronics and movement in jazz, discussed her latest release with Ashley Kahn. On Sunday, Peter Mapp introduced us to audio apps for



Judy Collins, folk and pop music icon, discussing her new album.



Jane Ira Bloom uses her sax to make a point at a “hot lunch.”



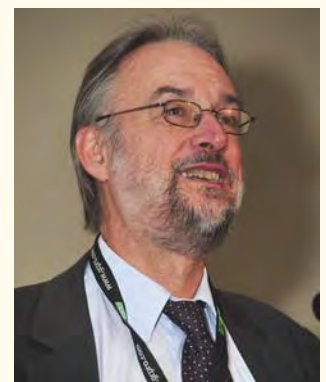
International recording star, Ben Folds, right, discusses his career and latest retrospective with Errol Kolosine.



Grammy SoundTable: from left, Al Schmitt, Chris Lord-Alge, Phil Ramone, Ken “Duro” Ifill, Steve Lillywhite, and Ann Mincielli.

the iPhone and iPad, including a variety of acoustic measurement devices, while Skip Pizzi looked at the future of broadcasting in a connected world.

The Richard C. Heyser Memorial Lecture, organized by the Technical Council, took place on the second evening of the convention, and was given by John Atkinson, editor of *Stereophile* magazine and a keen recording engineer. He asked “Where Did the Negative Frequencies Go?” All real



Karlheinz Brandenburg discusses the “The MP3 Story.”



Technical Council officers present John Atkinson with a copy of Richard Heyser's "Time Delay Spectrometry" at the Heyser Memorial Lecture.

numbers, he said, have two roots but we routinely discard the negative root on the grounds that it has no real significance. When it comes to understanding the perception of music, he suggested, perhaps some of the things we discard as engineers merit further examination.

STUDENTS GET BUSY

Student members form a significant proportion of the international body that is the Audio Engineering Society. The AES is where they come to learn from the pros, get introduced, and get their careers moving. Thanks to coordinators John Krivit and Philip Parenteau, a full-on program of student and education events was on hand at the 131st. In addition to the recording competitions that



Some of the student activities at the 131st: a busy education fair (top) was manned by school staff and students (bottom left), while a number of students won prizes for their recordings (below)



have become a standard feature of the convention student events, SPARS had organized a speed counselling session with experts from the industry, in cooperation with AES, GANG (Game Audio Network Guild), Post NY Alliance, and others. Students were privileged to benefit in their recording competitions from the advice of world-class panels of judges including Darcy Proper and Ronald Prent, while Ian Corbett had arranged recording critique sessions during which students were encouraged to bring their recordings for feedback in a noncompetitive setting.

TECHNICAL TOURS TAKE VISITORS OUT AND ABOUT

Louis Manno had taken advantage of the rich pickings available in New York City to organize a selection of technical tours with attractive features. For those interested in broadcasting facilities, a trip to NBC Broadcast Central was a must, taking in the new high-definition nerve center of the company's national broadcasting operations. Live sound enthusiasts could take a trip to the New Jersey Performing Arts Center to discover how you fill a 2700-seat concert hall with sound using little to zero amplification, while vinyl fanat-

ics could get on the bus to Brooklynphono, where a modern pressing plant, opened ten years ago, now manufactures 10,000 albums a month, competing successfully with CDs.

HISTORICAL PROGRAM CELEBRATES THE PAST

Under the guiding hand of awardee, Harry Hirsch, the historical program provided a rich glimpse into the past of sound recording, starting with a review of Leopold Stokowski and the history of analog recording presented by Robert Auld. His multimedia presentation included rare audio recordings, still photos, and film clips, all drawn from the extensive activities of Stokowski over the course of his career. Noah Simon moderated a tribute to Walter Sear on Sunday, addressing the man's incomparable life and legendary accomplishments from audio engineering and music composition to his experiments with Theremins and synthesizers. On Sunday, Tom Fine's exploration of the history of recording techniques in American classical recording from one microphone to 24 tracks took the audience on a tour of stereo's "golden age of recording," including a comparative listening session featuring Grammy winning recordings of Ravel's *Daphnis and Chloë*, recorded over three decades.

TECHNICAL COUNCIL AND STANDARDS MEETINGS

Here at the 131st Convention there was a full program of standards meetings, coordinated by Mark Yonge and Richard Chalmers, as well as a comprehensive bill of Technical Committee meetings covering the many fields of endeavor that make up audio engineering. The Technical Council is responsible for the technical leadership of the Society, particularly in respect of forthcoming topics for convention sessions, conferences, and advisory technical documents. It also organizes the Open House of the Technical Council at conventions.

AES COMMITTEES

In the background, and unseen by the majority of delegates to a convention, much of the business of the Society takes place in committee rooms where future conferences, publications, and the strategy of the organization are planned. The Annual Business Meeting at the outset of the convention confirmed that AES membership reached yet another high, numbering well over 14,000 individuals. Recent offerings such as online tutorials and the enhanced website have strengthened the benefits of membership. During the Regions and Sections meeting representatives of AES sections from around the world met with the Society's vice presidents to share examples of exciting local events and membership initiatives. The Board of Governors met on the evening of the last day of the convention, during which the society's future policy and direction was debated.

Good technical facilities and assistance are crucial to the success of a convention, and the sterling efforts of Facilities Chair Michael McCoy were appreciated by all those taking part. A team of volunteers organized by Doron Schächter was also on hand to ensure the smooth running of this complex event, and their efforts are to be commended.



Jan Abildgaard Pedersen chairs the Conference Policy meeting.



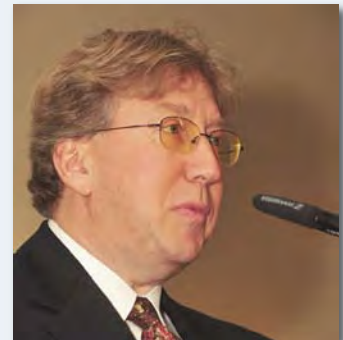
Bob Lee, secretary, and Garry Margolis, treasurer, at the Annual Business Meeting



John Krivit chairs a meeting of the Education Committee.



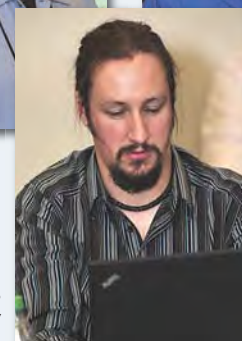
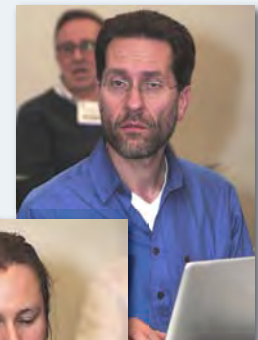
Francis Rumsey (chair, Regions and Sections), right, and Frank Wells (VP Central US/Canada), at a meeting of the Regions and Sections Forum (photo on left).



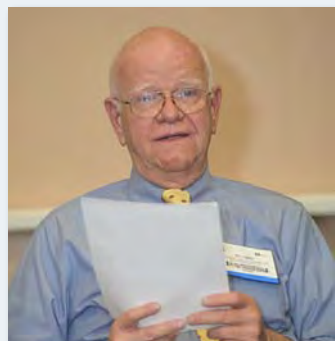
Chris Freitag, chair of the Board of Tellers announces election results.



Bozena Kostek (incoming editor of the *AES Journal*) and Ville Pulkki (incoming chair, Publications) at the Publications Policy meeting.

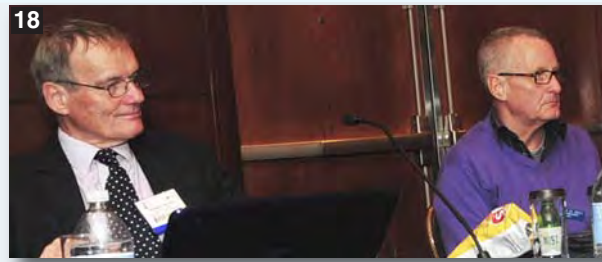
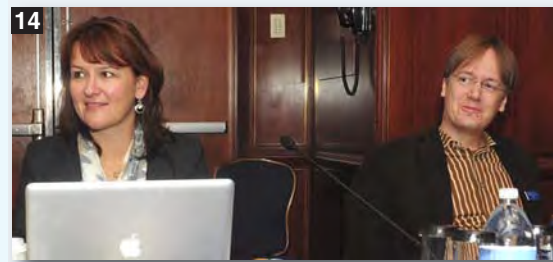
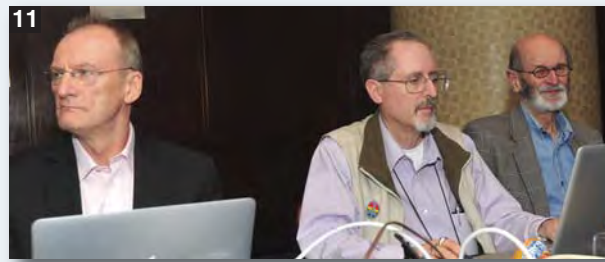
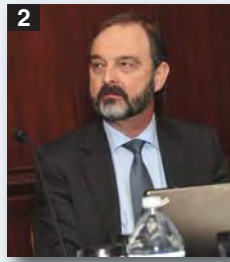


Officers of the Technical Council: clockwise from top left, Bob Schulein (chair) and vice chairs Jürgen Herre and Michael Kelly



Bill Wray chairs a meeting of the Historical Committee.

AES officers and committee chairs meet during the convention



BOARD OF GOVERNORS MEETS



- 1** Jim Kaiser, president; Bob Lee, secretary
- 2** Roger Furness, executive director
- 3** Sean Olive, USA/Canada Western Region vice president; Garry Margolis, treasurer and Finance Committee chair
- 4** Antonio de Oliveira, Europe Southern Region vice president; Jan Abildgaard Pedersen, president-elect and Conference Policy Committee chair
- 5** Bob Schulein, Technical Council chair; David Josephson, governor; Bob Moses, governor
- 6** Joel De Viera Brito, Latin America Region vice president; Jay Fouts, legal counsel
- 7** Robert Breen, USA/Canada Eastern Region vice president; Christopher Freitag, Tellers chair; Bill Wray, Historical Committee cochair
- 8** Peter Cook, governor; Michael Fleming, incoming USA/Canada Central Region vice president
- 9** Theresa Leonard, Membership Committee chair; Bozena Kostek, Europe Central Region vice president and incoming editor
- 10** Bob Chira, incoming legal counsel; John Krivit, Education Committee chair; Gary Gottlieb, incoming governor
- 11** Wieslaw Woszczyk, Laws and Resolutions Committee chair; Ron Streicher, Laws and Resolutions Committee; David Murphy, governor
- 12** Kimio Hamasaki, International Region vice president; Jim Anderson, governor and Convention Policy Committee vice chair
- 13** Umberto Zanghieri, incoming Europe Southern Region vice president; Bruce Olson, governor and incoming Standards Committee chair; Frank Wells, USA/Canada Central Region vice president and president elect
- 14** Agnieszka Roginska, governor and Convention Policy Committee chair; Ville Pulkki, Europe Northern Region vice president
- 15** Han Tendeloo, Special Advisory Group chair
- 16** John Vanderkooy, editor
- 17** Søren Bech, Publications Policy Committee chair; Francis Rumsey, Regions and Sections Committee chair
- 18** Richard Chalmers, Standards Committee chair; Diemer de Vries, past president

The AES Board of Governors met on October 23 to discuss strategy with AES officers and standing committees.